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## In the United States Patent and Trademark Office

## In re Patent Application:

Serial No.: 10/602,225

Confirmation No.: 1104

Filing Date: 6/23/03

Inventors: Ratson MORAD et al.

Title: System Architecture of Semiconductor  
Manufacturing Equipment

Examiner: Kilday, L.

Group Art Unit: 2829

Attorney docket: AM 5296.D1

**OFFICIAL****CERTIFICATE OF TRANSMISSION:** I certify that this correspondence is being facsimile transmitted to the US Patent & Trademark Office, fax no. (703) 872-9306, on the date entered below.July 2, 2004  
Date  
Robert J. SternMail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**RESPONSE TO RESTRICTION REQUIREMENT**

In response to the Examiner's Action mailed 6/2/04, please consider the following remarks.

Applicant traverses the restriction requirement, but elects embodiment A4 B1 C1 in the event the restriction requirement is sustained.

All pending claims, claims 7-22, read on the elected embodiment. Claim 13 is the only claim that recites all elements of the elected embodiment, but all other pending claims are generic to the elected embodiment because they do not include limitations that exclude the elected embodiment.

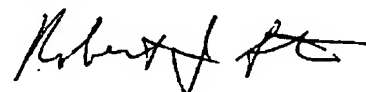
The restriction requirement is improper because it is based on an erroneous identification of species by the Examiner. MPEP 806.04 (f) states that "Claims to be restricted to different species must be mutually exclusive." None of the pending claims are directed to mutually exclusive species. Therefore, the claims cannot be subject to a restriction requirement.

In particular, the Examiner improperly defines Group A as consisting of four species. Species 3, copper followed by Ta/TaN, does not exist. There is no disclosure in the specification, and no claim directed to, depositing copper and subsequently depositing either Ta or TaN. Species 1 (Ta or TaN deposition) and Species 2 (copper deposition) are not mutually exclusive; rather, they are successive steps of the preferred embodiment, each of which optionally can be performed or not performed. They are not mutually exclusive because either of these two steps can be performed or not performed regardless of whether the other step is performed. Therefore, these two deposition steps are not related as two species. Species 4 is simply the combination of these two steps, performed in succession.

The Examiner improperly defines Group B as consisting of two species defined as Species 1, wherein native oxide is removed, and Species 2, wherein native oxide is not removed. Species 1 is an optional step of the preferred embodiment, but it is not mutually exclusive with any other step. Therefore, the Examiner's Species 2 is not a valid species because the specification does not disclose, and the claims do not recite, any process that precludes the step of removing native oxide.

Group C, Species 2, is not a valid species for the same reason that Group B, Species 2, is not. That is, the specification discloses no process that precludes the heating step of Group C, Species 1.

Respectfully submitted,



Robert J. Stern  
Attorney for Applicant  
Registration no. 29,703  
Tel. (650) 365-4880